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May 31, 2002

BY HAND DELIVERY

Marlene H. Dortch, Esquire
Secretary
Federal Communications Commission
445 12th Street, NW
Washington, DC 20554

Re: *Ex Parte* Communication
MM Docket Nos. 01-235 and 96-197

Dear Ms. Dortch:

On behalf of Media General, Inc. ("Media General"), I hereby transmit two *ex parte* submissions related to the above-captioned dockets. The first submission is a more in-depth description of the methodology used in an economic study that was prepared by Economists Incorporated and included as Appendix A to the reply comments that Media General filed in these dockets on February 15, 2002. The second submission is a memorandum entitled "Empirical Literature on the Economic Effects of Cross-Media Ownership." This additional information is provided by Media General at the request of Judith Herman, Assistant Division Chief, Industry Analysis Division of the FCC's Media Bureau.

In accordance with 47 C.F.R Section 1.1206(b), two copies of this letter are being submitted for each of the above-referenced dockets.

Very truly yours,

M. Anne Swanson

Enclosures

cc w/encls. (by hand delivery):
Ms. Judith Herman

No. of Copies rec'd 0+5
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Description of Data and Procedures Used in the Regression Analysis Contained in "Behavioral Analysis of Newspaper-Broadcast Cross-Ownership Rules in Medium and Small Markets"

This memorandum describes in further detail the regression analysis of newspaper advertising rates contained in "Behavioral Analysis of Newspaper-Broadcast Cross-Ownership Rules in Medium and Small Markets," prepared by Economists Incorporated in January 2002 (hereinafter the "Analysis"). The origin of the basic econometric approach is discussed, and full diagnostics are presented for the models presented in Tables 1-3 of the Analysis.

1. Specification of the Econometric Model

The econometric model employed was a reduced-form model which expresses the price of newspaper advertising for a sample of daily newspapers as a function of structural and demographic features, concentration as measured by the Herfindahl-Hirschman Index ("HHI"), and common ownership with a television station. This approach follows a long line of previous studies employing essentially similar econometric techniques to explore the relationship between concentration and economic competition in media markets.[1]

A previous analysis (July 1998) looked at the relationship between cross-ownership and newspaper advertising rates in a sample of newspapers from markets of all sizes.[2] In the current study, the specification in the previous analysis was retained in order to explore further any relationship between cross-ownership and newspaper advertising

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[1] See "Empirical Literature on the Economic Effects of Cross-media Ownership" submitted concurrently with this paper.

[2] See "Structural and Behavioral Analysis of the Newspaper-Broadcast Cross-Ownership Rules," Economists Incorporated, July 1998, attached as Appendix B to the Newspaper Association of America's (NAA) comments in In the Matter of 1998 Biennial Regulatory Review—Review of the Commission's Broadcast Ownership Rules and Other Rules Adopted Pursuant to Section 202 of the Telecommunications Act of 1996, MM Docket No. 98-35, (released March 13, 1998) ("1998 Biennial Review").

rates specifically for smaller markets. The specification assumes that newspaper advertising rates are related to several factors, such as the number of readers, the demographic features of that geographic locale, and structural features of the newspaper in question.

The 1998 *Editor and Publisher Yearbook* contains data on circulation and advertising rates for 1,509 U.S. daily newspapers. These data were combined with data from BIA, U.S. Census data, and other state-level data. The regression utilized data on each of the 1,423 U.S. daily newspapers for which these other data were also available. The set of variables considered is listed below.

> Individual characteristics of each newspaper, such as newsstand price (daily edition), a dummy variable for papers which publish both morning and evening editions, population in the city where the newspaper is published, dummy variables for Saturday and Sunday editions, and a dummy variable for newspaper format (tabloid vs. broadsheet).
>
> Characteristics of the DMA market in which the newspaper is published. Market-specific measures include per capita income by population group, level and growth of retail sales, level and growth of household income, number of television households, expected and historical population growth, expected and historical household growth, and the percentage of the population belonging to various ethnic groups.
>
> Supply factors, such as state Gross Domestic Product (GDP), the average level of wages, the price per kilowatt-hour of energy, and pulp prices.

The point of the econometric analysis is to formulate a sensible economic model of advertising prices based on econonomic theory and knowledge of media markets.[3] Economic theory dictates that most of the market indicators considered in this study should have a positive effect on advertising rates. For instance, profit-maximizing

advertisers presumably want to reach wealthier viewers as well as those who earn and spend more on average, just as they want their messages to reach areas with growing populations, so these variables should tend to increase the price of advertising, holding other factors constant. Theory does not indicate the direction (positive versus negative effect on prices) or significance of some of the other variables considered, such as the ethnic composition variables. Clearly some advertisers want to focus their message on one or more specific groups, while others do not. The purpose of these variables is only to control for any effect they may have on advertising rates. Pulp and energy prices were tested as supply variables, given their significance in determining the cost of printing a newspaper. Out of the group of possible choices above, a small but sufficient set of regressors was chosen based on the following criteria:

- Economic plausibility of the estimated results. In preliminary regressions, those variables with an estimated coefficient contrary to economic theory were investigated with further diagnostics to determine the cause of the aberrant result. Possible causes include measurement error in the variables, collinearity among the variables, or a weak economic relationship to advertising prices. The variables used in the final estimated model were those with estimated coefficients consistent with economic theory and knowledge of media markets in general.
- Econometric "goodness of fit."[4] In some cases there were a number of similar variables which carried the same economic content, such as median household income and the level of retail sales in a particular DMA. In these cases, variables which produced a better individual and overall statistical fit to the data were selected for the final model.

[3] For a discussion of standard model building and diagnostic techniques, see Greene, William H. *Econometric Analysis*, 2nd Edition, Macmillan: New York, (1993), Chapters 5, 7, and 8.

[4] "Goodness of fit" refers to certain standard econometric criteria employed in model building, such as individual t-tests, R^2, and RMSE (Root Mean Square Error).

2. Measuring Concentration

The econometric specification also hypothesized a potential relationship between newspaper advertising rates and the level of competition for advertising in each locale. The measure of concentration used in this analysis was the HHI based on advertising revenue for newspaper, radio, and television within each DMA. The procedures for computing these HHIs are described in an accompanying submission.[5]

3. The Baseline Regression

The unit of observation for this approach is an individual newspaper. Because of the large role circulation plays in determining advertising rates (it is almost a tautology that newspapers that reach more readers charge higher ad rates), circulation will virtually always be the most significant determinant of advertising rates. Rather than concentrating separately on the obvious role of circulation on advertising rates, the dependent variable was formed by dividing the open-inch rate for each newspaper by circulation. In this way, we focused only on the determinants of advertising rates besides circulation. After excluding a number of tiny newspapers, the full sample included 1,412 newspapers. Because the regression was estimated in natural logs, each coefficient should be interpreted as an elasticity. For example, the coefficient of 0.116 on per capita income indicates that a 10% change in per capita income would increase advertising rates in that locale by 11.6% The full regression diagnostics for the estimated model are presented in Appendix I.

As discussed in the 1998 study, the HHIs used in the Analysis could contain measurement error. First, the DMA may not be the proper geographic market for all of the daily newspapers in the sample. Practical necessity dictated using DMAs, as it was not possible for this study to undertake a detailed study of the correct geographic market for each of the 1,400 newspapers. Second, there was imprecision in the revenue estimates for individual newspaper, television, and radio stations. To account for possible

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[5] See "Description of Data Procedures Used in 1975-2000 Structural Comparison in 'Horizontal and Vertical Structural Issues and the Newspaper-Broadcast Cross-Ownership Ban,'" at 4-5, submitted concurrently with this paper.

measurement error in the HHI calculations, the model was estimated using instrumental variables ("IV"). The essence of the IV approach is to find variables which can help to predict the variable which is suspected of measurement error but which are unrelated to the dependent variable. Although the revenues for each of the radio, television, and newspapers in each DMA were not known exactly, the number of each type of property in each DMA were known exactly. These counts are clearly correlated with the HHIs, and thus were a natural choice to serve as instruments.

4. Cross-Ownership in Smaller Markets

Table 1 of the Analysis reproduces the econometric model results from our July 1998 study, estimated over the entire sample of 211 DMAs. Neither overall market concentration measured in a TV-radio-newspaper market nor cross-ownership had a statistically significant effect on newspaper advertising rates. The remainder of the paper used two econometric techniques designed to focus specifically on the question of smaller markets. The first technique was to restrict the full sample to subsamples which contained only medium and small markets. Table 2 presents the results of the estimations restricting the sample to the lowest quartile of DMAs (159-211), the second lowest quartile of DMAs (106-158), and the lower half of DMAs (106-211). The dummy variable representing cross-owned properties is not significant in any of these subsamples. Appendix II presents the full regression output for each of the three models summarized in Table 2, including all of the estimated coefficients.

The last section of the Analysis considered the possibility that the overall results in smaller DMAs presented in Table 2 might be masking the presence of a cross-ownership price effect in a particular market. Table 3 presents the results where any possible effect of cross-ownership on prices is estimated separately for each cross-owned newspaper. The estimated effects are not significant for any DMA. Appendix III presents the full regression output for Table 3, including all estimated coefficients.

Appendix I – Basic Model (Table I from the Analysis)

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The SYSLIN Procedure
Two-Stage Least Squares Estimation

Model lrate
Dependent Variable lrate

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	9	903.2569	100.3619	598.17	<.0001
Error	1402	235.2284	0.167781		
Corrected Total	1411	1138.092			

Root MSE	0.40961	R-Square	0.79338
Dependent Mean	2.85917	Adj R-Sq	0.79206
Coeff Var	14.32622		

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|
Intercept	1	-3.62266	0.843251	-4.30	<.0001
Log of Per-capita income	1	0.116396	0.061763	1.88	0.0597
Log of Price per kilowatt-hour of electricity	1	0.141775	0.051420	2.76	0.0059
Log of Population	1	0.448711	0.009095	49.34	<.0001
Log of Price for M-F Edition	1	0.109312	0.044058	2.48	0.0132
Indicator for Saturday Edition	1	0.243187	0.026285	9.25	<.0001
Indicator for Sunday Edition	1	0.168464	0.026049	6.47	<.0001
Log of Percentage of Population Hispanic	1	-0.05429	0.009534	-5.69	<.0001
Log of HHI	1	0.031537	0.056046	0.56	0.5737
Indicator for Cross-owned	1	0.086229	0.063751	1.35	0.1764

Appendix II – One Model For Each of the Three DMA Subgroups (Table 2 of the Analysis)

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The SYSLIN Procedure
Two-Stage Least Squares Estimation

Model lrate
Dependent Variable lrate

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	9	192.7869	21.42077	144.92	<.0001
Error	380	56.16841	0.147812		
Corrected Total	389	248.0401			

Root MSE	0.38446	R-Square	0.77438
Dependent Mean	2.69601	Adj R-Sq	0.76904
Coeff Var	14.26045		

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|
Intercept	1	-5.76594	2.041907	-2.82	0.0050
Log of Per-capita income	1	0.196827	0.167550	1.17	0.2408
Log of Price per kilowatt-hour of electricity	1	0.086998	0.096500	0.90	0.3679
Log of Population	1	0.431307	0.019086	22.60	<.0001
Log of Price for M-F Edition	1	0.106095	0.099346	1.07	0.2862
Indicator for Saturday Edition	1	0.215195	0.048594	4.43	<.0001
Indicator for Sunday Edition	1	0.182562	0.048786	3.74	0.0002
Log of Percentage of Population Hispanic	1	-0.05759	0.022328	-2.58	0.0103
Log of HHI	1	0.263314	0.210483	1.25	0.2117
Indicator for Cross-owned Newspaper	1	-0.16998	0.107479	-1.58	0.1146

The SYSLIN Procedure

Two-Stage Least Squares Estimation

Model lrate

Dependent Variable lrate

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	9	128.3619	14.26244	152.18	<.0001
Error	344	32.24084	0.093723		
Corrected Total	353	160.6625			

Root MSE	0.30614	R-Square	0.79925
Dependent Mean	2.66535	Adj R-Sq	0.79400
Coeff Var	11.48603		

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|
Intercept	1	-2.96790	0.746082	-3.98	<.0001
Log of Per-capita income	1	0.022214	0.063740	0.35	0.7277
Log of Price per kilowatt-hour of electricity	1	0.222064	0.078829	2.82	0.0051
Log of Population	1	0.425628	0.018983	22.42	<.0001
Log of Price for M-F Edition	1	0.220289	0.079735	2.76	0.0060
Indicator for Saturday Edition	1	0.219116	0.039801	5.51	<.0001
Indicator for Sunday Edition	1	0.101232	0.042686	2.37	0.0183
Log of Percentage of Population Hispanic	1	-0.04127	0.013393	-3.08	0.0022
Log of HHI	1	0.092749	0.049265	1.88	0.0606
Indicator for Cross-owned Newspaper	1	0.077948	0.105463	0.74	0.4603

The SYSLIN Procedure

Two-Stage Least Squares Estimation

Model lrate

Dependent Variable lrate

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	9	537.7295	59.74772	266.46	<.0001
Error	658	147.5395	0.224224		
Corrected Total	667	679.5299			

Root MSE	0.47352	R-Square	0.78470
Dependent Mean	3.05713	Adj R-Sq	0.78175
Coeff Var	15.48913		

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|
Intercept	1	-5.02131	1.804829	-2.78	0.0056
Log of Per-capita income	1	0.090967	0.163452	0.56	0.5780
Log of Price per kilowatt-hour of electricity	1	0.226112	0.100645	2.25	0.0250
Log of Population	1	0.454666	0.013235	34.35	<.0001
Log of Price for M-F Edition	1	0.099622	0.064200	1.55	0.1212
Indicator for Saturday Edition	1	0.306333	0.045964	6.66	<.0001
Indicator for Sunday Edition	1	0.228023	0.043646	5.22	<.0001
Log of Percentage of Population Hispanic	1	-0.06181	0.017541	-3.52	0.0005
Log of HHI	1	0.222294	0.138767	1.60	0.1097
Indicator for Cross-owned Newspaper	1	0.232030	0.106615	2.18	0.0299

Appendix III – Model Including Separate Cross-ownership Effect for Each DMA (Table 3 of the Analysis)

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The GLM Procedure

Dependent Variable: lrate

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	47	913.476988	19.435681	118.03	<.0001
Error	1364	224.614973	0.16467		
Corrected Total	1411	1138.091961			

R-Square	Coeff Var	Root MSE	lrate Mean
0.802639	14.19296	0.405800	2.859165

Source	DF	Type I SS	Mean Square	F Value	Pr > F
lpercap	1	36.3475704	36.3475704	220.72	<.0001
lpkwh	1	31.6764394	31.6764394	192.36	<.0001
lfpop	1	806.6060463	806.6060463	4898.21	<.0001
lpricemf	1	1.9552816	1.9552816	11.87	0.0006
sat	1	14.0534733	14.0534733	85.34	<.0001
sun	1	6.6891540	6.6891540	40.62	<.0001
lhisp	1	5.5557439	5.5557439	33.74	<.0001
lhhi	1	0.0241038	0.0241038	0.15	0.7021
xown*dmarank	39	10.5691751	0.2710045	1.65	0.0078

Source	DF	Type III SS	Mean Square	F Value	Pr > F
lpercap	1	0.3832014	0.3832014	2.33	0.1274
lpkwh	1	1.1042899	1.1042899	6.71	0.0097
lfpop	1	373.5519587	373.5519587	2268.44	<.0001
lpricemf	1	0.2668615	0.2668615	1.62	0.2032
sat	1	14.9078370	14.9078370	90.53	<.0001
sun	1	7.9655051	7.9655051	48.37	<.0001
lhisp	1	5.5670077	5.5670077	33.81	<.0001

lhhi	1	0.0899324	0.0899324	0.55	0.4600
xown*dmarank	39	10.5691751	0.2710045	1.65	0.0078

Parameter	Estimate	Standard Error	t Value	Pr > |t|
Intercept	-2.459939596	0.64393475	-3.82	0.0001
Log of Per-capita income	0.090075127	0.05904777	1.53	0.1274
Log of Price per kilowatt-hour of electricity	0.124636951	0.04813017	2.59	0.0097
Log of Population	0.438223697	0.00920095	47.63	<.0001
Log of Price for M-F Edition	0.063161153	0.04961571	1.27	0.2032
Indicator for Saturday Edition	-0.249640115	0.02623730	-9.51	<.0001
Indicator for Sunday Edition	-0.181479479	0.02609354	-6.95	<.0001
Log of Percentage of Population Hispanic	-0.055561886	0.00955605	-5.81	<.0001
Log of HHI	-0.022024091	0.02980246	-0.74	0.4600
Cross-owned Newspaper*Dma rank 113	0.127741011	0.40697505	0.31	0.7537
Cross-owned Newspaper*Dma rank 126	0.280201007	0.40679236	0.69	0.4911
Cross-owned Newspaper*Dma rank 139	0.395596295	0.40631322	0.97	0.3304
Cross-owned Newspaper*Dma rank 141	-0.097327703	0.40670761	-0.24	0.8109
Cross-owned Newspaper*Dma rank 148	-0.078200081	0.40733330	-0.19	0.8478
Cross-owned Newspaper*Dma rank 161	0.155834024	0.40701665	0.38	0.7019
Cross-owned Newspaper*Dma rank 167	0.082083207	0.40693319	0.20	0.8402
Cross-owned Newspaper*Dma rank 168	-0.035244983	0.40761299	-0.09	0.9311
Cross-owned Newspaper*Dma rank 182	-0.142156168	0.40853027	-0.35	0.7279

MEMORANDUM

May 29, 2002

Empirical Literature on the Economic Effects of Cross-Media Ownership

There is a substantial existing literature attempting to estimate the empirical effect of cross-media ownership on advertising rates. The purpose of this memorandum is to summarize the salient work in this area. Although one early study found an effect on advertising rates as a result of cross-ownership, later studies are nearly uniform in concluding that cross-ownership has no effect on advertising prices or actually reduces them.

Studies of the Effect of Cross-Media Ownership on Advertising Rates

Studies by Owen (1969, 1973) indicated that newspaper-television combinations allowed media companies to charge higher rates for advertising than newspaper and television stations that were separately owned. This positive result, which was not found in other studies, appears to be caused by the exclusion of audience size as an explanatory variable.

In his equation for the television market, Owen utilized the individual station as the unit of observation and selected the price of national advertising (the station's highest hourly rate) as the dependent variable. The independent variables were market demographics (population and income) and dummy variables for cross-media ownership, network affiliation, VHF vs. UHF indicator, and the presence of other media competitors. Using 1966 data, he found that the cross-media ownership dummy variable was positive. He also ran a similar equation for newspapers where the dependent variable was the daily newspaper rate (per line of national advertising), and the independent variables included population, chain and cross-media ownership, the number of editions, and the presence of

other media competitors. Using 1966 data, he again found that joint ownership of a newspaper and a TV station increased the advertising price. [1]

As suggested above, a controversial issue in Owen's estimation is that he excluded audience size (or circulation) as an explanatory variable on the basis that it is endogenous (*i.e.*, a result of the characteristics captured by the other independent variables). A study by Lago (1971) is a direct rebuttal to the Owen analysis. Lago included circulation and audience size measures in his equations, but controlled for possible endogeneity through the use of two-stage least squares estimation. Lago found no statistically significant relationship between advertising rates and ownership structure for newspapers or TV. Wirth and Allen (1979) argued that the endogeneity described by Owen cannot be accepted for the dependent variable used in Owen's TV equation (the highest prime time hourly rate) because "most programs during this time are selected at the network rather than the station level." Although Wirth and Allen's justification did not take into account a large category of programs which are not produced at the station level but are still under their control (*e.g.*, syndicated programs), once they included the size of the audience as an explanatory variable, cross-media ownership had no effect on advertising rates for either daily newspapers or television stations.

Given that a large proportion of the programming in local network-affiliated TV stations is provided by the networks, Wirth and Wollert (1984) focused on other programming segments that are controlled locally. Specifically, "local news broadcasts are locally produced and, consequently, stations have full control over spot sales, editorial content, and promotion." Based on 1978 data, they found that same-market newspaper-television joint ownership had no effect on the price of 30-second spots broadcast during a station's local news reports.

A different approach to the problem of endogeneity in this context can be found in Ferguson (1983). Instead of including circulation in the right-hand side of the equation,

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[1] The FCC acknowledged that the later Owen study was "subject to many doubts, so that even the Department [of Justice] d[id] not vouch for its methodology or conclusions." *Amendment of Sections 73.34, 73.240, and 73.636 of the Commission's Rules Relating to Multiple Ownership of Standard, FM, and Television Broadcast Stations,* 50 FCC 2d 1046, ¶ 39 (1975). The FCC's own examination "d[id] not substantiate the findings of" the study, and the Commission was unable to demonstrate "an effect on [television advertising] rates attributable to newspaper ownership." *Id.* at ¶¶ 39,96.

Ferguson utilized a slightly different dependent variable. Unlike Owen or Lago, who focused on the newspaper rate per line of national advertising, Ferguson argued that the appropriate dependent variable is the newspaper "milinch" advertising rate (the rate per column inch per thousand circulation), which takes into account the level of circulation. What newspapers charge per column inch and what advertisers are willing to pay for space is a positive function of circulation. Ferguson used 1976 data to investigate the possible variation in newspaper advertising rates due to, among other factors, local newspaper-broadcast cross-ownership. After controlling for market demographics (population and income), the number of competing media outlets (newspapers, TV stations, and radio stations), and newspaper chain ownership, Ferguson found that ownership of a television station by a newspaper in the same market significantly *decreased* newspaper milinch advertising rates and significantly increased newspaper circulation, for both daily and Sunday newspapers, and for both national and retail advertising. Ferguson also found that ownership of a radio station and a newspaper in the same market had no significant effect on newspaper milinch advertising rates, but again significantly increased daily newspaper circulation. According to Ferguson, the negative coefficient for the newspaper-television cross-ownership variable implies that "the supply effect (the decrease in milinch advertising rates due to possible economies of cross-ownership that lower costs and increase circulation in the presence of economies of circulation) is greater than the demand effect (the possible increase in column inch advertising rates resulting from joint profit maximization)."

In an attempt to overcome the concern that the dependent variable in previous studies was taken from price lists ("rate cards") rather than from actual negotiated transaction prices, Wirth and Allen (1980) utilized an average realized price as the dependent variable.[2] Specifically, they took the 1973 market revenue reported by the FCC and divided it by the average number of TV households actually watching television during

[2] The use of rate card data introduces potential measurement error from two sources and likely overstates actual advertising prices. First, as pointed out by Wirth and Allen (1980), "officially filed prices are an estimate of what a television station's advertisers can be expected to pay – based on such factors as time of day, expected quality of program, and audience size. What the sponsor actually pays is a negotiated price based more closely on actual (i.e., experienced) audience size." (p. 90). This issue may be particularly relevant for the television market, where audience sizes are highly variable and unpredictable. Second, rate cards do not account for discounts negotiated with individual advertisers.

prime time in that market. As independent variables they used household income, number of households with TV sets, number of competing outlets, and a dummy variable for cross-media ownership. They estimated separate equations for network revenues, national/regional advertising revenue, and local advertising revenue. Wirth and Allen found that television stations commonly owned with newspapers in the same markets charged *lower* advertising rates than television stations not jointly owned with newspapers.

A 1998 study by Economists Incorporated (1998) modeled newspaper advertising rates for over 1,400 daily newspapers.[3] After controlling for other relevant market and structural factors, the results indicated no relationship between advertising prices and cross-ownership. A follow-up to that study by Economists Incorporated (2002) concentrated on possible empirical effects on advertising prices due to cross-media ownership specifically in medium and small markets. Using the same reduced form model of newspaper advertising rates, that analysis found that cross-ownership did not lead to higher prices, specifically in smaller DMAs. The 2002 EI study focused on smaller markets using two separate analyses. The first performed standard regression analyses on subsets of the newspaper sample which included only smaller markets. The second analysis tested for any potential impact of cross-ownership for each and every DMA separately. After controlling for other factors, there was no statistically significant difference between advertising prices of cross-owned newspapers and those of other papers in either analysis.

Studies on Market Definition

In addition to the literature discussed above, several empirical studies have considered the issue of geographic and product market definition in media markets.

[3] A subsequent December 2001 study by Economists Incorporated updated the first portion of the 1998 study, a structural analysis which compared media market concentration levels in 1975 to media market concentration levels currently.

Although these studies did not necessarily deal with cross-media ownership directly, they provide relevant context on the issue of concentration in general.[4]

A study by Economists Incorporated (1996) analyzed the cross-ownership issue and directly addressed the issue of the proper scope of both the geographic and product markets in which media compete. The approach taken there avoided both the endogeneity as well as the rate card issue by focusing on the sales prices of media outlets. "Persistently higher prices due to reduced competition should also lead to higher profits for sellers in the market, other things equal, which can be expected to translate into higher sale prices when such firms are sold. Whether or not advertising prices are above competitive levels at the time a station is sold, a buyer should be willing to pay more for a station in a more concentrated market, other things equal."

Radio station sales prices were examined first in a candidate market defined to include only radio stations and daily newspapers. Narrower markets, comprised of only radio stations or only newspapers, were not analyzed because if the relevant product market for radio/newspaper combinations does not include both media, there can be no competitive effect from eliminating cross-ownership restrictions. The empirical analysis showed that concentration as measured by the Herfindahl-Hirschman Index ("HHI") in a radio-newspaper market is not statistically related to radio station sale prices. This finding suggests strongly that the proper relevant product market is broader than this pair of media. The analysis next examined a broader candidate market consisting of radio, newspapers, and TV. Even in this broader market, however, concentration was not related to the prices at which radio stations were sold. The absence of any statistically significant relationship is evidence that a market restricted to these three media is too narrow, and that the proper relevant product market includes other competing sellers of advertising such as direct mail and outdoor advertising. The analysis of radio station sale prices was reinforced by an analysis of TV station sale prices, which were examined first in a candidate market defined to include TV stations and newspapers, then in a market

[4] In particular, most of the media cross-ownership studies attempt to examine the issue of the potential empirical effects of cross-ownership separately from the issue of overall concentration. But the issue of overall concentration is critical to any analysis, and correct market definition in turn is the basis for placing the role of overall concentration in proper context.

including TV stations, newspapers and radio stations. As in the radio station analysis, TV station sale prices were not statistically related to concentration in either candidate market. This supports the finding that other media significantly compete with radio, newspaper, and TV.

The 1996 EI analysis then examined the product market question in the context of three alternative geographic markets which the Commission might consider. The first of the three geographic markets considered was the DMA (Designated Market Area), commonly used as a proxy for the area reached by TV stations and the principal geographic area for which Nielsen produces TV audience information. The second geographic market, the Arbitron Metro market, is the principal geographic area used by Arbitron in producing radio audience information. The third geographic market was based on the current cross-ownership rule, which focuses on the community in which a newspaper is published and the radio and TV stations with contours that encompass it. Each of the product markets described above was tested with each of these alternative geographic market definitions. Regardless of the geographic market, the statistical analysis supported the inference of a product market broader than radio, newspaper, and TV.

Conclusion

The papers discussed here utilized various data and econometric techniques to try to overcome the difficulties in properly defining both media markets and reliable measures of pricing in those markets. Furthermore, each paper took a slightly different approach to the question of how to test for empirical effects of cross-media ownership on advertising prices. All but one of the relevant studies found that cross-ownership has no effect on advertising prices or actually reduces them.

References

Economists Incorporated (1996). "An Empirical Investigation of the Scope of Competition Among Newspaper, Radio, Television and Other Advertising Media."

Submitted in response to *Notice of Inquiry* (NOI), In the Matter of Newspaper/Radio Cross-Ownership Waiver Policy, MM Docket No. 96-197, released October 1, 1996.

Economists Incorporated (1998). "Structural and Behavioral Analysis of the Newspaper-Broadcast Cross-Ownership Rules," Submitted in response to *Notice of Inquiry* (NOI), In the Matter of 1998 Biennial Regulatory Review—Review of the Commission's Broadcast Ownership Rules and Other Rules Adopted Pursuant to Section 202 of the Telecommunications Act of 1996, MM Docket No. 98-35, released March 13, 1998, at ¶ 28-42.

Economists Incorporated (2001). "Horizontal and Vertical Structural Issues and the Newspaper-Broadcast Cross-Ownership Ban" Submitted in response to *Notice of Inquiry* (NOI), In the Matter of Cross-Ownership of Broadcast Stations and Newspapers, MM Docket No. 01-235, and Newspaper/Radio Cross-Ownership Waiver Policy, MM Docket No. 96-197.

Economists Incorporated (2002). "Behavioral Analysis of Newspaper-Broadcast Cross-Ownership Rules in Medium and Small Markets." Submitted in response to *Notice of Inquiry* (NOI), In the Matter of Cross-Ownership of Broadcast Stations and Newspapers, MM Docket No. 01-235, and Newspaper/Radio Cross-Ownership Waiver Policy, MM Docket No. 96-197.

Ferguson, James (1983). "Daily Newspaper Advertising Rates, Local Media Cross-Ownership, Newspaper Chains, and Media Competition," *Journal of Law and Economics*, 26: 635-54.

Lago, Armando (1971). "The Price Effects of Joint Mass Communication Media Ownership," *The Antitrust Bulletin*, 16(4): 789-813.

Owen, Bruce (1969). "Empirical Results on the Price Effects of Joint Ownership in the Mass Media." *Studies in The Economics of Mass Communication*, No.93, Research Center in Economic Growth, Stanford University.

Owen, Bruce (1973). "Newspaper and Television Station Joint Ownership," *The Antitrust Bulletin*, 18(4):787-807.

Wirth, Michael O. and Bruce T. Allen (1979). "Another Look at Cross-media Ownership," *The Antitrust Bulletin* (Spring), pp. 87-103.

Wirth, Michael O. and Bruce T. Allen (1980). "Cross-media ownership, regulatory scrutiny, and pricing behavior," *Journal of Economics and Business*, 33(1): 28-42.

Wirth, Michael and James Wollert (1984). "The Effects of Market Structure on Television News Pricing," *Journal of Broadcasting*, 28(2): 215-24.